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VIABILITY OF UNORGANIZED PARKING LOTS IN FEDERAL POLYTECHNIC ILARO, YEWA SOUTH LOCAL GOVERNMENT AREA, OGUN STATE, NIGERIA

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 Abstract

The aim of this research is to examine the viability of unorganized parking lots in Federal Polytechnic Ilaro with the view to determining the feasibility of proposing more sustainable parking areas within the institution. The objectives are to identify the unorganized parking spaces in the study area; determine the parking volumes in the unorganized parking spaces; determine the viability of turning the unorganized parking spaces to organized parking spaces, make proposal for optimal and sustainable parking within the institution. The observatory approach, in the form of parking surveys that essentially relied on parking volume assessment, was adopted for this study. It also relied on secondary data essentially sourced from the Polytechnic's Master Plan and Strategic Plan. Findings, inter alia, reveals that the average hourly parking volume for all the unorganized parking spaces within the Federal Polytechnic Ilaro, varying from the 0.8 in West- Campus Market, 17.2 around B Block (BA, BB, BC, BD, BE, BF & Oba Hall), to 20 around School of Pure and Applied Sciences, is about 8. This of course, only slightly differs from the average parking volume of 14 for all the 15 organized parking spaces within the Polytechnic, as estimated by a previous study by just 6 counts. The study, among others, recommends the upgrade of the unorganized parking spaces around B-Block classrooms, School of Pure and Applied Sciences, Opposite Dean of Students Affairs Office, School of Environmental Studies, and the Poly Staff College.

 KEYWORDS: Lots, Parking, Surveys, Unorganized, Viability, Volume.

Introduction

Every person who owns a vehicle requires a space for parking (Aderamo &Salau, 2013). As the number of vehicles grow within ambiences of tertiary institutions, the need of space for parking increases. Due to the increasing growth rate in the ownership of cars by students and staffers of tertiary institutions, there is also an increase in the demand for parking. However, the behavioral tendencies of the vehicles' owners within tertiary institutions to park as nearly as possible to their offices, classrooms, laboratories, workshops, and other activity areas within campuses tend to be a major driver of the patronage of either unorganized parking spaces or incidental open spaces for parking. Unorganized parking spaces are essentially spaces that are not unapproved for parking in institutional master plans. Sometimes, even when organized open spaces are available, some vehicles owners in institutions with no strict parking policies, still recourse to curb-side parking.

As canvassed by Janak, Sanjay, Pritikana, and Maulana (2020), parking decision is influenced by demographic and economic factors such as age, income, number of parking space available, availability of parking policies, parking price, accessibility, time involved in looking out for parking spaces, and availability of guidance systems like road signs and verbal instruction by institutional wardens. There is no gainsaying the fact that the unsustainable parking practices pose great hazard for thorough-traffic during institution's quotidian peak hours and also during special institutional occasions. It also reflects poorly on institutions' image and represents blots on institutions' master plans, where available, that parking will be done indiscriminately.

Few studies had investigated parking tendencies and capacity utilization of organized parking spaces in Nigerian institutions (Nkem, Adepoju & Awoyera, 2015; Olugbenga&Oluwole, 2015; Adeniran, 2016; Olapeju and Adewara, 2023). Of the studies, only Olapeju & Adewara explored the parking lots' challenges from the environmentalist and conservative dimension of existential capacity utilization and concluded that unorganized parking spaces really need not exist as the organized ones were yet to be optimally utilized. However, the study did not consider assessing the present situation of parking in the unorganized spaces, and adopt a flexible approach in determining whether some of

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the unorganized parking spaces that are proximate to major activity areas, where organized parking spaces are currently lacking, can be re-planned and integrated in the institution's landscape element of the master plan.

Therefore, the aim of this study is to examine the viability of unorganized parking lots in Federal Polytechnic Ilaro with the view to determining the feasibility of proposing more sustainable parking areas within the institution. The objectives are to identify the unorganized parking spaces in the study area; determine the parking volumes in the unorganized parking spaces; determine the viability of turning the unorganized parking spaces to organized parking spaces, make proposal for optimal and sustainable parking within the institution.

Methodology

The Federal Polytechnic Ilaro is based in Yewa region of Ogun State, Southwestern Nigeria. It was established by law on July 25, 1979 and started-off circa November 15, 1979. The institution is defined by latitude 6° 53' 0" and longitude North, 3° 1' 0" East of the meridian. It has since been growing rapidly, offering educational services to over 16,000 students in its five faculties or schools.
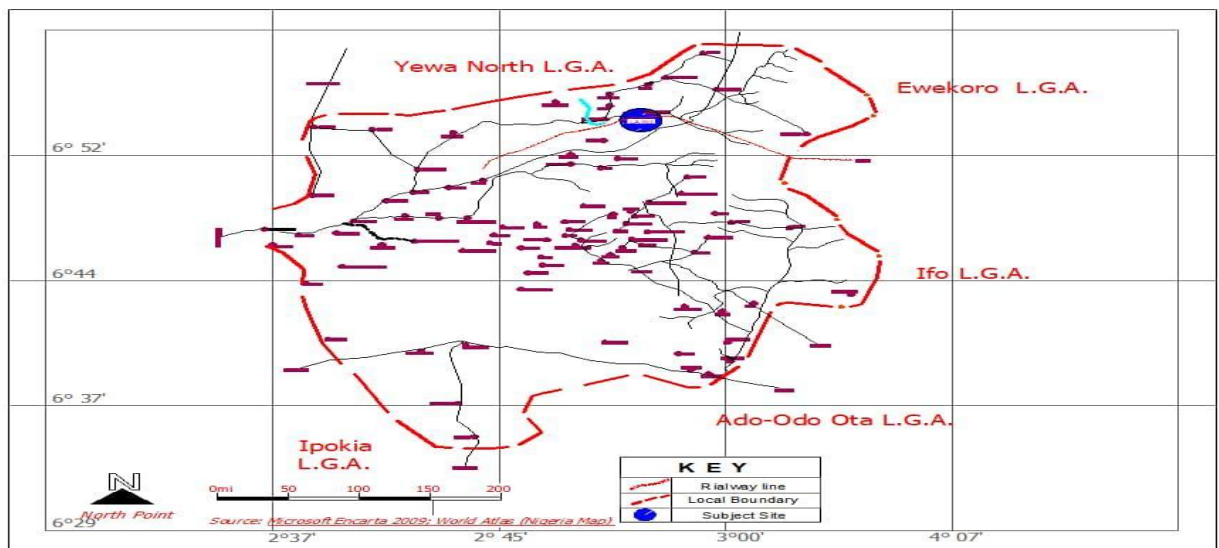
Figure 1: Map of Nigeria.
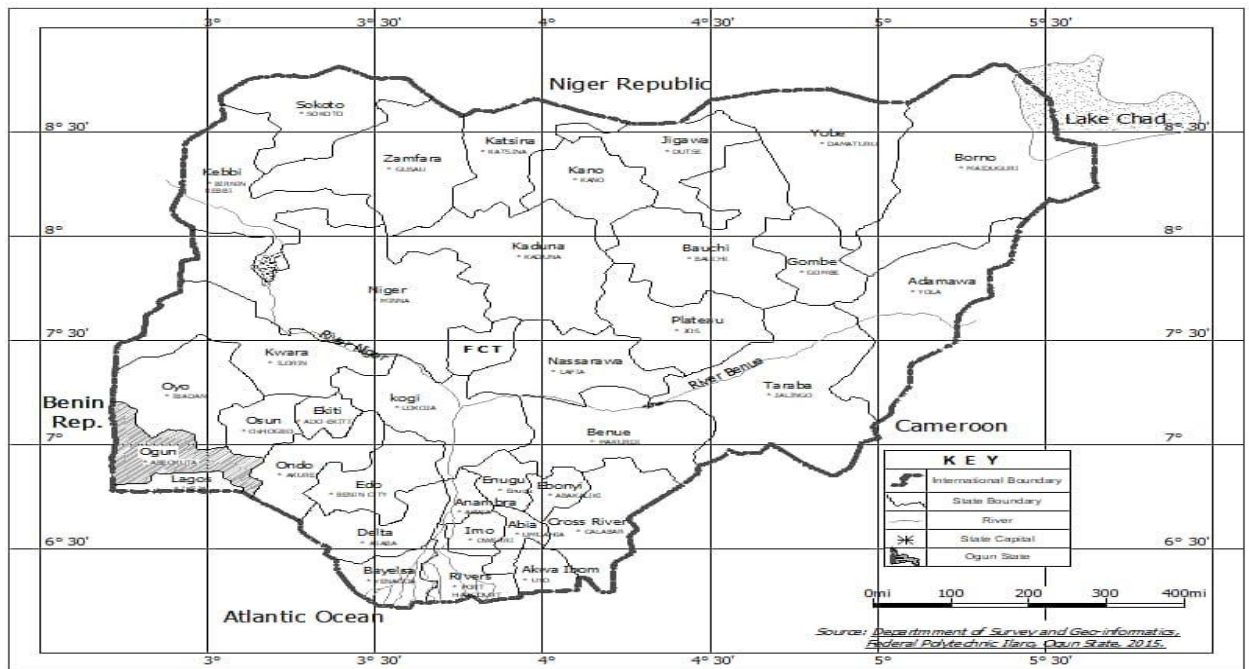
Source: Department of survey and Geo Informatics, Federal polytechnic Ilaro, 2015.

Figure 2: Map of Ogun State.

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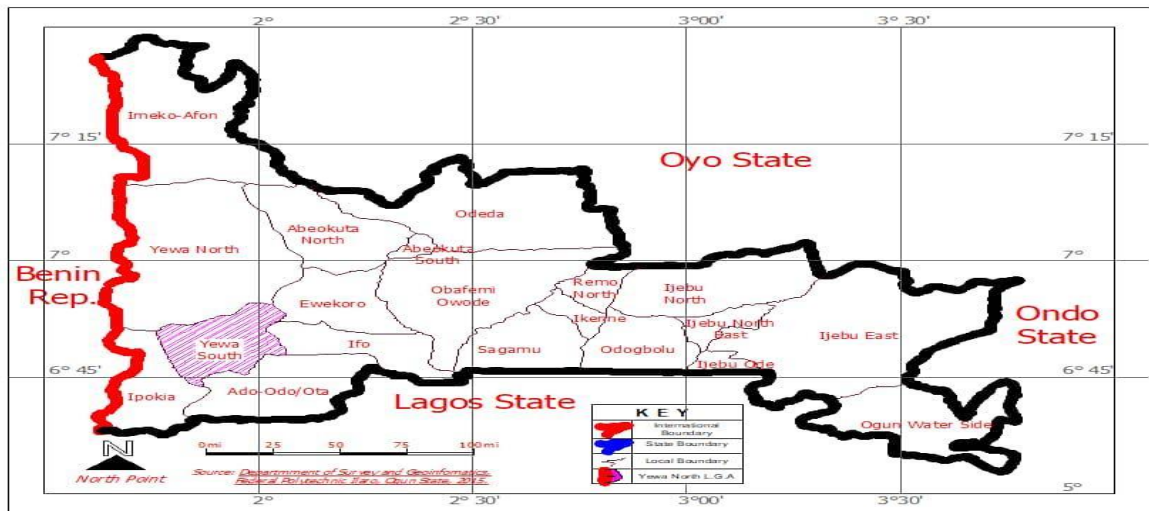
Source: Department of survey and Geo Informatics, Federal polytechnic Ilaro, 2022
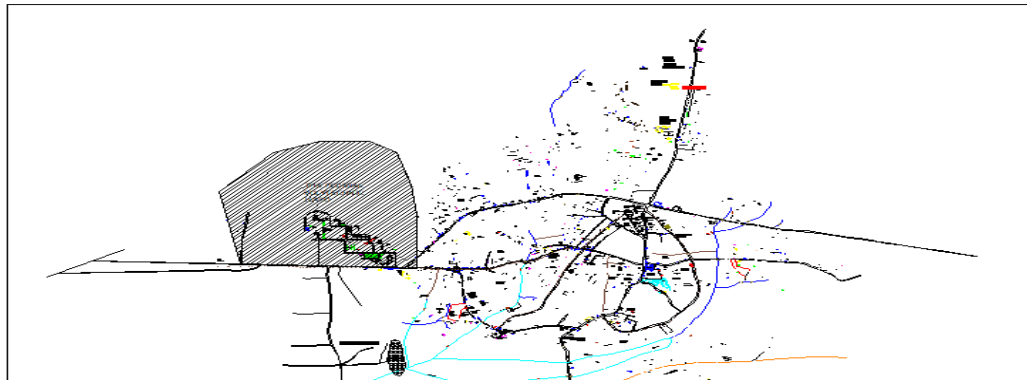
Figure 3: Map of Yewa South Local Government Area.

Source: Microsoft Encarta 2009; World Atlas (Nigeria Map)

Figure 4: Map of Ilaro Town Showing the Study Area.

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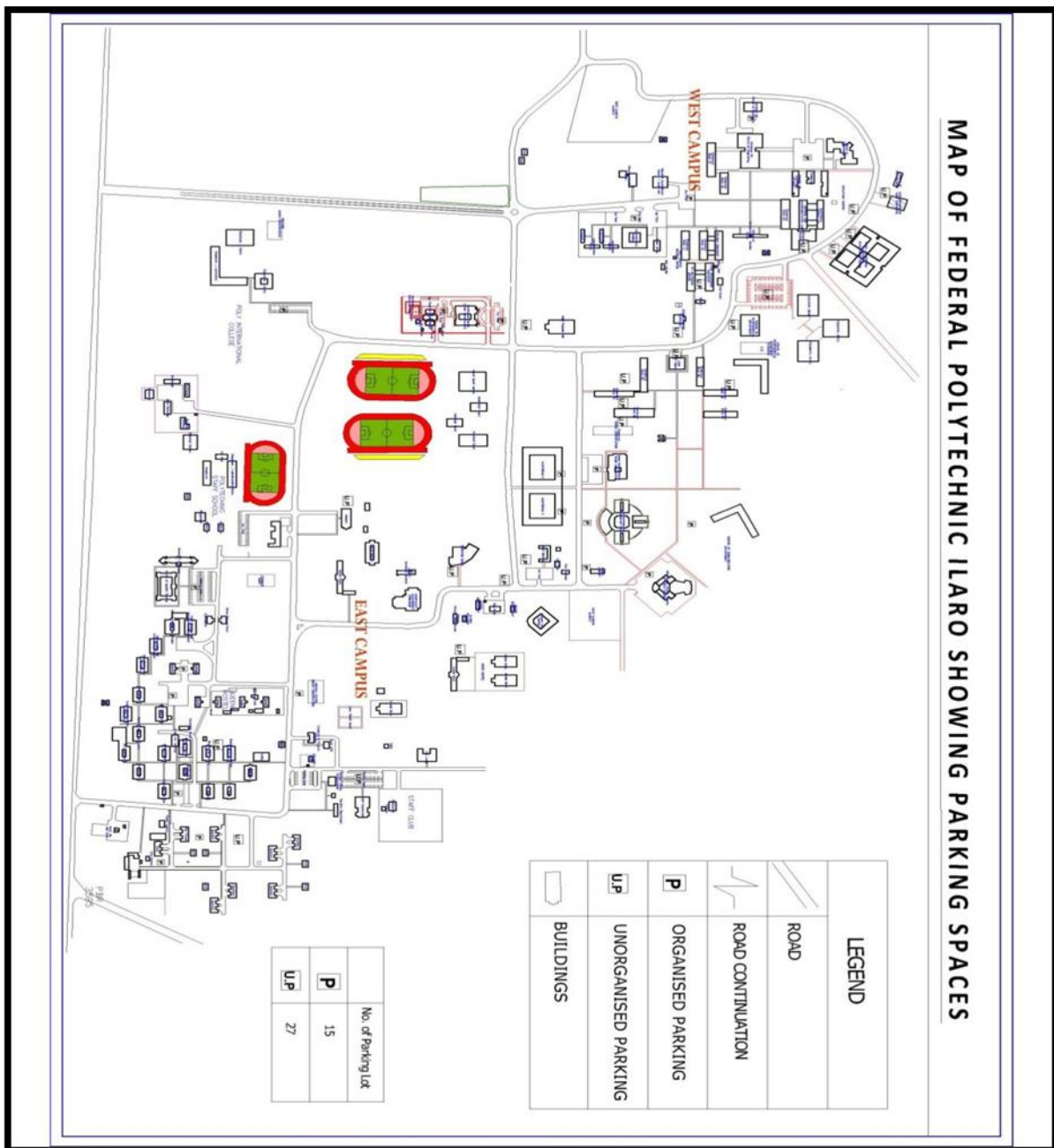MAP OF ILARO SHOWING SUBJECT SITE

Source: Ilaro Zonal Planning Authority,2022.

The observatory approach, in the form of parking surveys, was adopted for this study. It also relied on secondary data essentially sourced from the Polytechnic's Master Plan and Strategic Plan. A week-long parking survey spanning 10 hours (between 7.00am to 5.00pm) per day parking surveys was conducted to determine the parking volumes in the unorganized parking spaces. However other important parking metrics like parking load, parking capacity, parking turnover, and parking index could not be estimated in the absence of planned or delineated bays. In the context of the study, unorganized parking spaces are incidental spaces, curb-sides, and other spaces that have not been approved for parking in the institution's master plan. Parking volume is determined via the observation of the total number of vehicles parked within the hourly period during which observation took place. This, as a matter of fact, is meant to be one-off, as counts would not be repeated for same vehicles still parked in the subsequent hourly interval during which further observations will be done (Kadiyali., 2007). The idea is to have an objective basis for quantifying parking in organized spaces and to make informed judgment of what to make of the parking spaces in future plans.

Results/Discussion

Foremost, surveys conducted across the entire stretch of the institution's campus show that there are 27 unorganized parking spaces within it. Of course, as captured in figure 5, there are 15 organized parking spaces, which is the classification for parking spaces that are recognized by the school's master plan, which Olapeju and Adewara (2023) had deemed underutilized.

Figure 5: Spatial Distribution of Organized and Unorganized Parking Spaces Within the Campus of Federal Polytechnic Ilaro.

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Source: Field survey, 2022

From the data presented in Table 1, it is evident that the average hourly parking volume for all the unorganized parking spaces within the Federal Polytechnic Ilaro, varying from the 0.8 in West- Campus Market, 17.2 around B Block (BA, BB, BC, BD, BE, BF & Oba Hall), to 20 around School of Pure and Applied Sciences, is about 8. This of course, only slightly differs from the average parking volume of 14 for all the 15 organized parking spaces within the Polytechnic, as estimated by Olapeju & Adewara (2023), by just 6 counts. Olapeju & Adewara (2023) already made the case for underutilization of existing parking spaces and poor enforcement of parking policies as the banes of the proliferation of unorganized parking spaces within the institution. However, it is important to also consider Mohammed (2016) and Janak, Sanjay, Pritikana, and Maulana (2020)'s explanations that parking behavior in tertiary institutions is accounted for essentially by the need for vehicles' owners to gain the closest access to their

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destinations. In an increasingly expanding campus, a more flexible approach as envisaged by Nadimi, Afsharipoor and Amiri, (2021) and Rotaris and Danielis (2014) may lend itself useful towards enhancing the functionality of land uses and ultimate comfort of parking spaces users. This is expressible in the form of re-planning and upgrading of some of the viable unorganized spaces through laying out or designing parking units and providing facilities like sheds and demarcating kerbs within the parking spaces. This should be in furtherance of burnishing compliance with existential parking policy. To this extent, viability for unorganized spaces, is premised on the quantitative value of the parking volume in relation to the density of activities and land uses around the unorganized parking spaces. This, however, does not consider parking spaces beside roads, those in incidental open spaces or spaces that have been earmarked for other uses in the institution's master plan.

Figure 5: Parking Volumes of the Parking Spaces in the study area

S/N	Location	Average Hourly Parking Volume
1	Sculpture Garden	4
2	Architecture studio	9.2
3	Environmental studies Studio and workshop	9
4	Mechanical Engineering Workshops	2.4
5	West campus market	0.8
6	Nearby Raheem Oloyo Conference Hall	2.4
7	Multipurpose Hall	1.6
8	Poly Staff College	10
9	Poly Primary School	10.6

10	Poly Mosque	10.6
11	Poly Pure Water Factory	5.4
12	Poly School of Applied science	20
13	Microfinance bank	5.2
14	Pavilion ground	6.8
15	Near Poly First Gate	5.8
16	Opposite Dean of Students Affairs Office	14.4
17	CCL Hall	3
18	Main Library	8.4
19	School of Environmental Studies	10.4
20	ASUP Hall	2.8
21	Christian Union	9
22	Opposite East Campus market	5.2

23	CICS	4
24	B Block (BA, BB, BC, BD, BE, BF & Oba Hall)	17.2
25	PTDF	4.8
26	ICT center	11.8
27	Environmental / AG block	11
Total		205.8
Average		7.6

Conclusion/ Recommendations

From the findings, it is evident that there are about 27 unorganized parking areas within the institution, with total average hourly parking volume of about 8, ranging from the 0.8 in West- Campus Market, 17.2 around B Block (BA, BB, BC, BD, BE, BF & Oba Hall) , to 20 around School of Pure and Applied Sciences. The decision about the viability of unorganized spaces and consideration for re-planning and integration of the parking areas in the Polytechnic's master plan, is premised on the quantitative value of the parking volumes in relation to the densities of activities and land uses around the unorganized parking spaces. While there is need for Management of the Federal Polytechnic Ilaro to optimize the utilization of the current parking facilities and prevent illegal parking by improving existing parking facilities, most especially in terms of sheds provisioning to prevent indiscriminate parking under trees under the guise of looking out for canopies that is the common wont of vehicle owners, as argued by Olapeju & Adewara (2023), it is equally important to upgrade/ re-plan the viable unorganized parking spaces and integrate then in the landscape element of the institution's master plan. To this extent, it is important to develop the unorganized parking spaces around B-Block classrooms, School of Pure and Applied Sciences, Opposite Dean of Students Affairs Office, School of Environmental Studies, and the Poly Staff College. It is instructive that most of the unorganized parking spaces identified and recommended for upgrade have already been captured in the Polytechnic's current strategic plan (The Federal Polytechnic Ilaro, 2021). This study's viability consideration actually lends credence to the logic deployed in the aspect of the strategic plan that relates to parking facilities provisioning.

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